

WHAT IS CLAIMED IS:

1. A system comprising:
 - a gaslock that receives therein a first gas from a first portion of a lithography tool and a second gas from a second portion of the lithography tool;
 - a gas source that directs a third gas between the first gas and the second gas in the gaslock to isolate the first gas from the second gas;
 - a pump that pumps the first and third gas; and
 - a recycling device that receives the first and third gas from the pump, which separates the first gas from the third gas so that the first gas can be reused.
2. The system of claim 1, wherein said first gas is selected from the group consisting of xenon, lithium vapor, tin, krypton, and water vapor.
3. The system of claim 1, wherein said second gas is selected from the group consisting of helium, argon, hydrogen, and nitrogen.
4. The system of claim 1, wherein said third gas is selected from the group consisting of helium, neon, and nitrogen.
5. The system of claim 1, wherein the pump and the recycling device are coupled to and outside of the first portion.
6. The system of claim 1, wherein:
 - the first portion is a light source chamber; and
 - the second portion is an optics chamber.

7. The system of claim 6, wherein the light source chamber comprises a plasma light source.

8. The system of claim 7, wherein the first portion comprises a plasma light source that produces extreme ultra violet wavelengths of light.

9. A system comprising:

a means for receiving a first gas from a first portion of a lithography tool and a second gas from a second portion of the lithography tool therein;

a means for directing a third gas between the first gas and the second gas to isolate the first gas from the second gas;

a means for pumping the first and third gas; and

a means for separating the first from the third gas after receiving the first gas and the third gas from the means for pumping, such that the first gas can be reused.

10. The system of claim 9, wherein said first gas is selected from the group consisting of xenon, lithium vapor, tin, krypton, and water vapor.

11. The system of claim 9, wherein said second gas is selected from the group consisting of helium, argon, hydrogen, and nitrogen.

12. The system of claim 9, wherein said third gas is selected from the group consisting of helium, neon, and nitrogen.

13. The system of claim 9, wherein the means for separating and the means for pumping are coupled to and outside of the first portion.
14. The system of claim 9, wherein:
the first portion is a light source chamber; and
the second portion is an optics chamber.
15. The system of claim 9, wherein the first portion comprises a plasma light source.
16. The system of claim 9, wherein the first portion comprises a plasma light source that produces light having wavelengths in an extreme ultra violet spectrum.